

APPENDIX B

TROUBLESHOOTING UNDERFEED STOKERS

<i>Symptom</i>	<i>Probable cause</i>	<i>Remedy</i>
Using too much fuel.	Thin fuel bed due to excess air from fan.	Decrease air supply or increase coal feed.
	Thin fuel bed due to too much draft.	Adjust overfire draft by resetting dampers, or installing automatic dampers.
	Dirty heating surface.	Keep heating surfaces clean of soot and fly ash.
Insufficient heat.	Not enough coal feed (thin fuel bed).	Increase rate of feed and adjust air from fan.
	Fuel bed too deep.	Increase air supply, decrease fuel feed.
	Improper furnace draft.	See that overfire draft is sufficient to carry away products of combustion. Check design and condition of chimney.
	Limit control set too low.	Adjust limit control to weather conditions. Increase settings during cold weather, decrease during warm weather.
Excessive heat.	Fuel bed too heavy.	Decrease coal feed, adjust air supply.
	Limit control set too high.	Lower setting.
	Hold-fire or out-fire control set improperly,	Hold-fire controls are made to keep fire from going out. Set to hold fire only; set 2 minutes for each ½ hour.
	Excess furnace draft. (Fire goes out during off period)	Adjust draft controls to lower draft.
	Insufficient draft.	Chimney may be blocked or too small. Reset draft controls to increase draft.
	Insufficient air in furnace room.	Increase combustion air openings in furnace room.
	Dirty fuel bed.	Remove excess fly ash and clinkers from fire.
	Coke trees.	Adjust air supply to fuel feed, check furnace draft.
	Clinker in retort.	Maintain clean fires and proper adjustment of stoker.

<i>Symptom</i>	<i>Probable cause</i>	<i>Remedy</i>
Smoke from chimney.	Obstruction in feed tube.	Shut off stoker and remove obstruction.
	Feed screw worn or broken.	Replace feed screw.
	Coke ball in retort.	Remove coke ball, adjust feed and air supply.
	Insufficient combustion air.	Increase air. Check tuyere openings, windbox, fan blade and heating surfaces; clean if necessary.
Smoke from fire door.	Insufficient combustion space.	Consult stoker manufacturer.
	Insufficient furnace draft or too much air from fan.	Increase draft or reduce fan air.
Coke trees or coke bed.	Incorrect coal/air ratio.	Keep slide in fire door open. If coke bed is heavy, increase air or decrease coal feed. If tree is thin, reduce air or increase coal.
Fly ash.	Thin fuel bed.	Increase coal feed, adjust air supply.
	Dirty fuel bed.	Clean.
Soot.	Fuel bed too thick.	Increase air or decrease coal feed.
	Insufficient combustion space.	Consult stoker manufacturer.
Hopper smoke.	Fire burning in retort when stoker is idle.	Set damper. If trouble continues, increase coal feed or set time delay to run longer or more frequently.
	Dirty fires.	Remove clinkers, especially from retort.
	Insufficient furnace draft.	Increase draft.
	Hopper empty.	Fill.
	Siftings in windbox.	Clean windbox.
	Hopper lid not sealed.	Refit lid.
	Smoke eliminator tubes clogged. (Some stokers do not have this tube.)	Clean tubes.
	Feed screw not turning.	Determine reason and correct it.
	Coal too coarse.	Add fire coal.